

Arboricultural Consulting

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ATTACHMENT 9

20N07-00022

March 15, 2007

Bruce Knowlton
CamWest Development, Inc.
9720 NE 120th Pl. Suite 100
Kirkland, WA
98034

MAY 31 2007
AM
PLANNING DEPARTMENT
PM

RE: Tree Condition Evaluation Report
The Nettleton Property

Bruce:

This report is provided to you as a means of addressing the conditions of the trees on the Nettleton Property as required by the City of Kirkland, WA. This report presents results of condition evaluations and a site assessment conducted in late February, 2006. The purposes of the site visit and tree evaluations, and this report are as follows:

- To provide information on the tree conditions as pertaining to those that are viable or non-viable for preservation;
- To specify the acceptable limits of disturbance (LOD) for each of the trees as specified by the City of Kirkland;
- To make recommendations for limits of disturbance for each of the viable trees as they relate to several criteria including existing site parameters, tree species, tree health, type and degree of impact and timing of impacts.

You also requested that I evaluate which trees are appropriate to be transplanted. The trees which are good candidates to be transplanted, by virtue of their size, species and health, are identified on the Tree Evaluation Data forms. Whether or not transplanting trees is allowable, however, is an issue that will need to be addressed with the city.

I. Summary of this Report

This report addresses the conditions of 77 significant trees located on the subject property. In my opinion, thirteen significant trees on the projects site are, by virtue of their condition or health, not viable for retention.

II. Site Conditions

The project site is currently developed with four buildings including a large home, used as a funeral home, a chapel, a garage, two smaller buildings and a significant amount of asphalt parking area. The remainder of the site is well maintained and landscaped with a mixture of native and ornamental trees and shrubs and a large amount of lawn area, however, the entire site is developed, certain portions more or less than others.

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Because it is developed for moderate use, all of the trees can be considered to have been affected by impacts associated with a developed site, to varying degrees.

The arrangement and distribution of the trees varies from scattered singles to small clusters. The species of significant trees include the following:

- Box elder (*Acer negundo*)
- Common horsechestnut (*Aesculus hippocastanum*)
- Silver birch (*Betula pendula*)
- Deodar cedar (*Cedrus deodara*)
- Katsura (*Cercidophyllum japonicum*)
- Alaska cedar (*Chamaecyparis nootkatensis*)
- Hinoki cypress (*Chamaecyparis obtusa*)
- Boulevard cypress (*Chamaecyparis pisifera 'boulevard'*)
- Dogwood (*Cornus* species)
- Unidentified deciduous tree
- Common Beech (*Fagus sylvatica*)
- English holly (*Ilex aquifolium*)
- Sweetgum (*Liquidambar styraciflua*)
- Apple (*Malus* species)
- Colorado spruce (*Picea pungens*)
- Colorado blue spruce (*Picea pungens 'glauca'*)
- Western white pine (*Pinus monticola*)
- Ornamental pine (*Pinus* species)
- Scot's pine (*Pinus sylvestris*)
- London plane (*Platanus x acerfolia*)
- Black cottonwood (*Populus trichocarpa*)
- Cherry laurel (*Prunus laurocerasus*)
- Ornamental cherry (*Prunus* species)
- Douglas fir (*Pseudotsuga menziesii*)
- Red oak (*Quercus rubra*)
- Chinese willow (*Salix babylonica*)
- Arborvitae (*Thuja occidentalis*)
- Western red cedar (*Thuja plicata*)
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Significant trees range in size from several trees at 6" dbh to a black cottonwood at a very large 96" dbh.

III. Proposed Development and Constraints Affecting Tree Retention

The proposed development plan includes retaining the large residence, known as the Nettleton House, possibly relocating it to another location on the site and developing the remainder of the site with multi-family housing. CamWest had expressed interest in retaining as many of the trees as possible to enhance the appearance of the development.

IV. Tree Evaluation Methods and Results

Evaluations were conducted on 77 significant trees. The numbers of those indicated on the accompanying map have been assigned to each of the trees with orange, numbered flagging.

The species of all of the trees shown on the accompanying map were gathered during the site visit. For each tree, descriptive information, including dbh, crown spread and symmetry, live crown ratio, foliage condition, trunk and root defects and any other conditions warranting mention, was gathered during the investigation and is presented in this report. This information is used to assess the health and stability of the trees and in making recommendations for retention or removal based upon the current condition of each individual tree (i.e. viability due to condition and/or health). Chapter 95.10 of the Kirkland Zoning Code defines a "viable tree" as "A significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is relatively windfirm if isolated or remains as part of a grove, and is a species that is suitable for it's location. Obvious symptoms or signs of poor health and potential high risk of failure include, but are not limited to, rot, extensive decay cavities, signs of decline (such as sparse crowns), past mechanical failure, epicormic branch development and insect or disease problems. All trees were evaluated according to the methods specified in *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas*, 2nd Edition (Matheny and Clark).

IV.i. Tree Evaluation Results

Following are the results of the condition evaluations for the thirteen trees found to be in poor condition and those in good condition. Those found to be in poor condition possess one or more defects that either represent a considerable, non-repairable defect or, in the presence of new targets, namely houses, will pose a hazard and therefore are recommended to be removed. It should be noted that all of the trees had gone dormant prior to my assessment, therefore it wasn't possible to accurately quantify their live crown ratios. The main indicator of tree health for those that are deciduous and in dormancy is the length of new growth produced during the last growing season.

Trees Found to be in Poor Condition (Not Viable)

The following ten trees have been found to be in poor condition and therefore not viable:

1. Tree #16 – This is a small ornamental apple tree that possesses a considerable amount of trunk decay and branch dieback. While it is not large enough to pose a hazard, based upon condition alone, this tree is considered to be non-viable.
2. Trees #23 and #24 – Both very large black cottonwoods that are in very poor condition and health. Both have suffered previous leader failures, are experiencing dieback of the terminal and much re-growth from the point of failure. Because these trees are terribly large and possess obvious defects and symptoms of poor health, in my opinion, they would pose considerable hazards and therefore are considered to be non-viable.

3. Tree #25 – This is Scot's pine that has been topped at least once to provide clearance for the power lines. Topping, particularly for evergreen species with excurrent¹ form, results in poor architecture and the creation of a large wound in a location that does not readily heal. Therefore, in my opinion this tree is non-viable.
4. Tree #26 – This is a western white pine that has also been topped to provide clearance for the power lines above. For same reason tree #25 is determined to be non-viable, this tree is also found to be such.
5. Tree #32 – An unidentified deciduous tree that has been topped and has an extensive trunk decay column, therefore considered to be non-viable.
6. Tree #33 – This western white pine has also been topped drastically reducing its height. For the same reasons that trees #25 and #26 are considered to be non-viable, this tree is also considered to be such.
7. Tree #38 – Also an unidentified deciduous tree that has developed extensive trunk decay and appears to be dead. For these reasons, this tree is considered to be non-viable.
8. Tree #44 – This tree is a Douglas fir that shows symptoms of poor health and decline in the form of extensive branch dieback in the upper portions of the crown and sparse foliage/crown and smaller than normal needle size. Smaller than normal leaf size, and twig and branch dieback are mentioned as signs of decline in *Evaluation of Hazard Trees in Urban Areas* (Matheny and Clark, 1994). In my opinion, this tree is not in good health and therefore considered to be non-viable.
9. Trees #51, 52 and 53 – These three Douglas firs are located in the center of the site, surrounded by impervious surfaces, both asphalt and a building. The crowns of these trees show symptoms of extremely elevated stress levels, indicative of trees that are declining. The crowns are very sparse, the foliage is chlorotic and I noted branch dieback. The conditions of these trees have deteriorated to a point where they will not be capable of recovery. Therefore, these trees are considered to be non-viable.
10. Tree #64 – This Douglas fir has been topped, and therefore considered to be non-viable for the same reasons as the other topped trees.

Because these trees are found to be non-viable, I recommend that they are all removed. The remaining 64 significant trees were found to be in suitable conditions for retention. Please see section VII of this report for discussions of these trees and the recommended limit of disturbance.

V. Tree Preservation and Protection Measures

The following tree protection measures are specified by the City of Kirkland in section 35.6 of chapter 95 of the Kirkland Zoning Code. The City requires establishment of a protection area referred to as the "limits of disturbance (LOD)," defined in 95.10 as the boundary between the area of minimum protection around a tree and the allowable site disturbance as determined by a qualified professional." Please see the accompanying Tree Evaluation Map for visual representations of the recommended limits.

Tree Protection during Development Activity. Prior to development activity or initiating tree removal on the site, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities pursuant to the following standards:

a. Placing Materials near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or soil deposits, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.

b. Protective Barrier. Before development, land clearing, filling or any land alteration, the applicant shall:

1) Erect and maintain a readily visible temporary protective tree fencing along the limits of disturbance which completely surrounds the protected area of all retained trees or groups of trees. Fences shall be constructed of chain link and be at least four feet high, unless other type of fencing is authorized by the Planning Official.

2) Install highly visible signs spaced no further than 15 feet along the entirety of the protective tree fence. Said sign must be approved by the Planning Official and shall state at a minimum "Tree Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.

3) Prohibit excavation or compaction of earth or other potentially damaging activities within the barriers; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.

4) Maintain the protective barriers in place until the Planning Official authorizes their removal.

5) Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor.

6) In addition to the above, the Planning Official may require the following:

a) If equipment is authorized to operate within the critical root zone, cover the areas adjoining the critical root zone of a tree with mulch to a depth of at least six inches or with plywood or similar material in order to protect roots from damage caused by heavy equipment.

b) Minimize root damage by excavating a two-foot-deep trench, at edge of critical root zone, to cleanly sever the roots of trees to be retained.

c) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.

d) Maintenance of trees throughout construction period by watering and fertilizing.

c. Grade.

1) The grade shall not be elevated or reduced within the critical root zone of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one half of the area of the tree's critical root zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.

2) If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's critical root zone, it shall be permanently stabilized to prevent suffocation of the roots.

3) The applicant shall not install an impervious surface within the critical root zone of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root-induced damage to the impervious surface.

4) To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree's survival.

5) Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.

d. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.

e. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices.

VI. Construction Activities Likely to Occur within the LOD

Development of this project site with multi-family residences will require several forms of impacts. I anticipate the following forms of impacts and disturbances will be proposed within, or just beyond, the LOD of some of the retained trees:

- Grading;
- Excavation;
- Trenching;

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- Site clearing;
- Construction and
- The introduction of impervious surfaces.

Some of the retained trees are likely to be affected by these impacts to varying degrees. The extent to which the trees are impacted depends upon several factors including, but not limited to depth of cuts for grading, excavation and trenching, the distance between the trees' trunks and the disturbances, the time of year some of the activities take place and the amount of LOD area affected (one side of tree versus around entire tree) for grading, excavation and trenching. Depending upon the type, degree and location of the impacts, both the health and stability of the trees can be affected.

Reducing the degree of impacts the trees suffer can be achieved through two approaches. They are proposing alternative development actions and using alternative means of developing the project.

Following are examples of alternative development actions:

- Eliminating impacts within the LOD;
- Reducing the use (and thereby the impacts) with the LOD, and
- Selecting impacts within LOD that have less of an impact upon the retained trees.

Following are examples of alternative forms of impacts that have less of an impact upon the retained trees:

- Tunneling for utility trenches within the LOD;
- Using piling/pier foundations within the LOD;
- Implementing measures designed to increase the permeability through impervious surfaces within the LOD;
- Implementing soil protection measures to limit compaction during site work within the LOD, and
- Hand-dig for trenches and foundations within the LOD and hand cut roots (as opposed to tearing them with soil excavation equipment).

Discussions of the acceptable limits of disturbance for each tree found to be viable, as it relates to these activities, is discussed in the next section.

VII. Limits of Disturbance

The City of Kirkland requires that the limits of disturbance be established at the specified LODs of the trees found to be in a condition and health status appropriate for retention. In many cases, the required protection zone is very broad. In my opinion, for many of the trees with such broad LODs, work can be done within it's perimeter while still providing sufficient protection for the trees. Limits of disturbance are determined by factoring in several criteria, which include the following:

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- Species of tree
- Size/age of tree
- Condition and health of tree
- Extent of dripline
- Existing conditions within the dripline and just beyond its perimeters (such as existing features {i.e., buildings or impervious surface}, compacted soils or other factors that may restrict root growth)

Following are the recommended LODs for all of the trees found to be viable based upon the existing site parameters/conditions. All of the recommended LODs are the location of minimum disturbance for these trees. For most trees, a range is specified, between the perimeter of no disturbance and the minimum LOD wherein the impacts are to be lessened through implementation of the alternative practices previously discussed. For others the perimeter of the no disturbance zone is enough to provide complete protection and doesn't require additional distance wherein the impacts should be lessened through the implementation of alternative construction practices;

Tree# and LOD Recommendations

- 1 This tree is a sweetgum that is in very good condition and health, and by virtue of its size, is considered to be young and vigorous. Presently, there is impervious surface within its dripline to the west and a rockwall to the east. The dripline spread, at a narrow 12 feet from the trunk, is unlikely to restrict the development, while still providing sufficient protection, is recommended as the LOD;
- 2 This tree is a red oak that is in very good condition and health, and by virtue of its size, is considered to be young and vigorous. Presently, there is impervious surface within its dripline to the west and a rockwall to the east. The dripline spread, at a narrow 12 feet from the trunk, is unlikely to restrict the development, while still providing sufficient protection, is recommended as the LOD
- 3 This tree is an apple that is in generally good condition, but, by virtue of its size, is considered mature. Its dripline has a spread of 25'. Presently there is impervious surface well within its dripline to the north and well-used lawn area to the south east and west, which is likely moderately compacted. The tree is small in height and not likely to pose a hazard. Because the low crown would require pruning if impacts, such as structures were proposed within the dripline, the recommended LOD for this tree is 13 feet from the trunk which should provide sufficient protection, particularly given the existing impacts therein;
- 4 This tree is a blue spruce that is in very good condition and health, and by virtue of its size, is considered to be young and vigorous. Presently, there is a structure within its dripline to the west and a rockwall to the west. The dripline spread, at 10 feet from the trunk, is unlikely to restrict the

- development, while still providing sufficient protection, is recommended as the LOD;
- 5 This tree is also a blue spruce that is in very good condition and health, and by virtue of it's size, is considered to be young and vigorous. Presently, there is a structure within it's dripline to the west and a rockwall to the west. The dripline spread, at 10 feet from the trunk, is unlikely to restrict the development, while still providing sufficient protection, is recommended as the LOD;
 - 6 This tree is another apple that is in generally good condition, but, by virtue of its size, is considered mature. It's dripline has a spread of 20'. Presently there is well-used lawn area, which is likely moderately compacted, throughout it's entire dripline. The tree is small in height and not likely to pose a hazard. Because the low crown would require pruning if impacts, such as structures were proposed within the dripline, the recommended LOD for this tree is the dripline at 10 feet from the trunk which should provide sufficient protection, particularly given the existing impacts therein;
 - 7 This tree is a multi-trunked cherry laurel that, generally, is in good condition and health. It's crown spread is approximately 30 feet. The surrounding landscape is largely unimpacted. Because the crown is so low, any impacts proposed within the dripline would require extensive pruning. Therefore, the recommended LOD a distance of approximately 15 feet from the trunk which should provide sufficient protection;
 - 8 This is a silver birch that appears to be in very good health and condition. The surrounding landscape is largely unimpacted. Its crown spread is approximately 40 feet. The tree is very near to the eastern property boundary, close enough that if this tree is retained, it is unlikely that the portion of the property between it and the property boundary will not be developed. Therefore, it is my opinion that a minor reduction of the dripline on the west side of the tree, to a distance of 15 feet, is acceptable for the LOD of this tree;
 - 9 This tree is a deodar cedar that is in good condition and health, however, by virtue of its size, it's considered to be mature. The crown spread is 25 feet. Presently, there is a deck and a sidewalk within the dripline of this tree, however, each of these impact is minor as the deck is raised and the sidewalk is a small amount of impervious surface. For a tree of this size, the dripline is rather narrow, therefore, I recommend establishing the LOD an additional 2.5 feet beyond the edge of the dripline for a total of 15 feet from the base of the tree;
 - 10 This tree is a blue spruce. that is in good condition and health, however, by virtue of its size, it's considered to be mature. The crown spread is 25 feet. Presently, there is a raised deck within the its dripline, however, because it is raised, represents an existing feature with minor impact upon the tree. Like number 9, for a tree of this size, the dripline is rather narrow, therefore, I also recommend establishing the LOD of this tree an additional 2.5 feet beyond the edge of the dripline for a total of 15 feet from the base of the tree;

- 11 This is a red oak that is in good condition and health. The surrounding landscape includes planting beds and lawn area. It is likely that the soils beneath the lawn area area moderately compacted. Given the existing surrounding site conditions, the dripline of the tree, at 13 feet from the trunk, will provide adequate protection as the LOD;
- 12 Tree #12 is a katsura that is in good health and condition. It's immediately adjacent to tree #11 and surrounded by the same site conditions. However, it's dripline is narrower at a spread of 15'. While this species' growth habit produces narrow driplines, in my opinion, it is not adequate to provide protection for this tree. I recommend establishing the LOD at an additional 2.5' beyond the dripline at a distance of 10 feet from the trunk;
- 13 This tree is a London plane that is in good condition and health. The surrounding site conditions are the same as that for #s 11 and 12. The dripline, at 25 feet, is rather limited for a tree of this size. Therefore, I recommend establishing the LOD at an additional 2.5 feet beyond the dripline at a distance of 15 feet from the trunk around the entire tree;
- 14 This tree is a red oak that is in good condition and health. It's dripline has a total spread of 35 feet. The surrounding landscape is the same as that for trees 11, 12 and 13, that being moderately impacted. A distance equal to the dripline, or approximately 18 feet from the trunk, is adequate to provide protection and therefore is recommended as the LOD;
- 15 Another red oak that is in good condition and health that also has a dripline spread of 35 feet and is in the same location and under the same conditions as number 14. Also like number 14, a distance equal to the dripline, or approximately 18 feet, is adequate to provide protection as the LOD for this tree;
- 16 Poor condition, non-viable and not recommended to be retained;
- 17 This tree is a multi-trunked cherry laurel that, generally, is in good condition and health. It's crown spread is approximately 30 feet. The surrounding landscape is largely unimpacted. Because the crown is so low, any impacts proposed within the dripline would require extensive pruning. Therefore, the recommended LOD is a distance equal to the dripline, or approximately 10 feet from the trunk, which should provide sufficient protection;
- 18 This tree is an ornamental cherry that is in good condition and health. The surrounding site conditions are relatively unimpacted. The dripline, at an approximate distance of 15 feet from the trunk, is adequate to provide protection for this tree and is recommended as the LOD;
- 19 This tree is an English holly that is in good condition and health. The surrounding site conditions are relatively unimpacted. The dripline, at a distance of 15 feet, is more than adequate to provide protection for a tree of this size and species. Establishing the LOD at a distance of 15 feet from the tree and is enough to provide sufficient protection;
- 20 This tree is a multi-trunked cherry laurel that, generally, is in good condition and health. It's crown spread is approximately 25 feet. The surrounding landscape is largely unimpacted. Because the crown is so low, any impacts

- proposed within the dripline would require extensive pruning. Therefore, the recommended LOD is the dripline, or a distance of approximately 13 feet, which should provide sufficient protection, and because the spread is so broad for a tree of this size and species, there is no additional protection beyond this distance required;
- 21 This tree is another multi-trunked cherry laurel that, generally, is in good condition and health. It's crown spread is approximately 25 feet. The surrounding landscape is largely unimpacted. Because the crown is so low, any impacts proposed within the dripline would require extensive pruning. Therefore, the recommended LOD is the dripline, or a distance of approximately 13 feet, which should provide sufficient protection, and because the spread is so broad for a tree of this size and species, there is no additional protection beyond this distance required;
- 22 This tree is an ornamental cherry that is generally in good condition and health. The surrounding landscape is largely unimpacted. Given the condition of this tree and that of the surrounding landscape, the dripline, at a distance of approximately 18 feet, is recommended as the LOD;
- 23 Poor condition, non-viable and not recommended to be retained;
- 24 Poor condition, non-viable and not recommended to be retained;
- 25 Poor condition, non-viable and not recommended to be retained;
- 26 Poor condition, non-viable and not recommended to be retained;
- 27 A portion of this box elder has been topped to provide clearance for the overhead utility lines, however, the remainder of the tree looks healthy. To the south is a public right-of-way and to the north is lawn. The dripline of this tree is rather narrow at a spread of approximately 15 feet. The recommended LOD is a distance of 10 feet from the trunk and no additional protection is necessary;
- 29 This western white pine is in good condition and health, bordered by the public right-of-way to the south and lawn to the north. The recommended LUD for this tree is an additional 2.5 feet beyond the dripline to approximately 15 feet from the trunk;
- 30 This is a young and vigorous deodar cedar that is in very good health and condition. At present, it's dripline is very narrow; approximately 8 feet from the trunk. As this tree grows, it will need more space for its crown. To meet this need, the LUD is an additional 2 feet from the trunk for a distance of approximately 10 feet from the trunk, but additional protection beyond the LUD is not necessary;
- 31 This is a very large and mature deodar cedar that is also in very good health and condition and bordered by public right-of-way to the south and lawn area to the north. Because there will no impacts to the south of the tree, the LOD is recommended to be at a distance of 18 feet from the trunk;
- 32 Poor condition, non-viable and not recommended to be retained;
- 33 Poor condition, non-viable and not recommended to be retained;
- 34 This tree is a multi-trunked cherry laurel that, generally, is in fair condition and health. It's crown spread is approximately 15 feet. The surrounding

- landscape is largely unimpacted. Because the crown is so low, any impacts proposed within the dripline would require extensive pruning. Therefore, the recommended LOD is the dripline, or a distance of approximately 8 feet from the trunk, which should provide sufficient protection without any additional protection beyond the LOD;
- 35 This western red cedar is in fair condition and surrounded by relatively impacted landscape. At a total spread of 20 feet, the dripline is rather narrow for a tree of this size with its rooting habit. The LOD should be located an additional 5 feet for a total distance of 15 feet from the trunk;
- 36 This western white pine is in fair condition and surrounded by relatively unimpacted landscape. At a distance from the trunk of 15 feet, the dripline is broad enough to provide sufficient protection for the tree as the LOD;
- 37 This is common beech tree that is in very good health and condition, however, it also has a narrow crown spread (30 feet) for its size. As with tree #35, the LOD for this tree should also be located an additional feet beyond the edge of the dripline for a total distance of 15 feet from the trunk;
- 38 Poor condition, non-viable and not recommended for retention;
- 39 The Douglas fir is generally in good condition and surrounded by relatively unimpacted lawn area. Given the surface rooting habit of this species, the dripline, at a distance of 15 feet from the trunk, is broad enough to provide sufficient protection as the LOD;
- 40 Another common beech that is in good condition and health, also with a rather narrow crown for a tree of this size. The recommended LOD is an additional 2.5 feet from the trunk beyond the dripline for a total distance of 20 feet from the trunk, which should provide sufficient protection without any additional protection beyond the LOD;
- 41 A rather large western red cedar that is generally in good condition, and surrounded by relatively unimpacted lawn area. The dripline, at a distance of approximately 10 feet from the trunk, is sufficient to provide protection without any additional protection beyond the LOD;
- 42 This red oak is considerably large and in very good health and condition; it is in the same location as tree #41. The crown spread is broad at approximately 50 feet. Because it is so broad, the LOD can be within the dripline while still providing adequate protection for the tree. The LOD is recommended to be approximately 18 feet from the base of the tree.
- 43 The Douglas fir is generally in good condition and surrounded by relatively unimpacted lawn area. Given the size of this tree and the surface rooting habit of this species, the dripline, at a distance of 18 feet from the trunk, is broad enough to provide sufficient protection as the LOD;
- 44 Poor condition, non-viable and not recommended for retention;
- 45 This is a large Chinese willow with a very broad dripline at 32.5 feet from the trunk. The surrounding landscape is relatively unimpacted with lawn area. Because the crown spread/dripline is so broad, the LOD can be placed nearer to the tree and still provide adequate protection for the tree. I recommend a distance of 25 feet between the trunk and the LOD;

- 46 This is a small ornamental cherry in a planting bed. It appears to be in good condition and health. Its dripline at approximately 10 feet is adequate to provide protection, and is therefore recommended as the LOD;
- 47 This tree is a rather large silver birch that is in good condition and health. It's surrounded by relatively unimpacted lawn area. The crown spread of 45 feet is rather broad, more than sufficient to provide adequate protection. The LOD can be within the dripline and still provide adequate protection. I recommend a distance of 20 feet from the base of the tree;
- 48 This is rather small pine tree that is in very good health and condition. There is a building immediately to its east and impervious surface near the tree to the west. Because of the existing impacts to the east, the LOD on that side can stay where the building is, while the those on all other sides of the tree should stay at the dripline, approximately 10 feet from the trunk, which should provide sufficient protection without any additional protection beyond the LOD;
- 49 This is medium-sized boulevard cypress that is in very good health and condition. There is a building immediately to its east and impervious surface near the tree to the west. Because of the existing impacts to the east, the LOD on that side can stay where the building is, while the those on all other sides of the tree should stay at the dripline, approximately 8 feet from the trunk which should provide sufficient protection without any additional protection beyond the LOD;
- 50 This is a Douglas fir that is in fair condition and health. It is also immediately bordered by the building to the east and much impervious surface to the north and east. It's likely that the fair condition of the tree is due to the stresses associated with the existing parameters. This tree could benefit from some additional protection. The recommended LOD is at its dripline, approximately 15 feet from the trunk, which, given the existing site conditions, should provide sufficient protection without any additional protection beyond the LOD;
- 51 This is another Douglas fir that is in fair condition and health, which is probably associated with the stresses associated with the adjacent site parameters as it is also immediately bordered by the building to the east and much impervious surface to the north and east. It's likely that the fair condition of the tree is due to the stresses associated with the existing parameters. This tree could benefit from some additional protection, as well. The recommended LOD is at its dripline, 15 feet from the trunk which, given the existing site conditions, should provide sufficient protection without any additional protection beyond the LOD;
- 52 Another Douglas fir that is in fair condition and health, also likely related to the stresses associated with the adjacent site parameters as it is also immediately bordered by the building to the east and much impervious surface to the north and east. It's likely that the fair condition of the tree is due to the stresses associated with the existing parameters. This tree could also benefit from some additional protection. The recommended LOD is at its

- dripline, 15 feet from the trunk which, given the existing site conditions, should provide sufficient protection without any additional protection beyond the LOD;
- 53 Another Douglas fir that is in fair condition and health, also likely related to the stresses associated with the adjacent site parameters as it is also immediately bordered by the building to the east and much impervious surface to the north and east. It's likely that the fair condition of the tree is due to the stresses associated with the existing parameters. This tree could also benefit from some additional protection. The recommended LOD is 15 feet from the trunk around the entire tree which, given the existing site conditions, should provide sufficient protection without any additional protection beyond the LOD;
- 55 This hynoki cypress is relatively young and in good condition in health. It's completely surrounded by existing features including impervious surface and a building. It also has a very narrow dripline and should maintain this width for the remainder of its life. Therefore, the LOD can be set at the edge of the dripline, approximately 8 from the trunk, and given the existing site conditions, no additional protection beyond the LOD is necessary. This tree may be better served elsewhere on the site, and because of its size, is an excellent candidate for transplanting;
- 56 This deodar cedar is also relatively young and in good condition in health. It's completely surrounded by existing features including impervious surface and a building, as well. It also has a very narrow dripline, however, given the growth habit of this tree, it will increase over time, therefore it will need more clearance. Therefore, the LOD should be set at least an additional five feet beyond the dripline for a total distance of 10 feet from the trunk which, given the existing site conditions, should provide sufficient protection without any additional protection beyond the LOD is necessary. This tree may also be better served elsewhere on the site, and because of its size, is an excellent candidate for transplanting;
- 57 This is an evergreen arborvitae that is in good condition and health and is completely surrounded by existing features including impervious surface and a building. It also has a very narrow dripline and should maintain this width for the remainder of its life. Therefore, the LOD can be set at the edge of the dripline, approximately 5 from the trunk. Given the existing site conditions, no additional protection beyond the LOD is necessary. This tree may be better served elsewhere on the site, and because of its size, is an excellent candidate for transplanting;
- 58 This is also an evergreen arborvitae that is in good condition and health and is completely surrounded by existing features including impervious surface and a building. It also has a very narrow dripline and should maintain this width for the remainder of its life. Therefore, the LOD can be set at the edge of the dripline, approximately 5 from the trunk. Given the existing site conditions, no additional protection beyond the LOD is necessary. This tree

- may be better served elsewhere on the site, and because of its size, is an excellent candidate for transplanting;
- 59 This is a rather large Douglas fir that is in fair condition and health. While at present, there are features, namely impervious surface, within its dripline, if retained, it could benefit from some additional protection. I recommend establishing the LOD at least 15 feet from the trunk;
- 60 This is also a rather large Douglas fir that is in fair condition and health. At present, there are features, namely impervious surface, within the dripline of this tree as well. If retained, it could also benefit from some additional protection. I recommend establishing the LOD at least 15 feet from the trunk;
- 61 This is a pine that is in very good condition and health and is bordered by existing features (impervious surface) to the north and west. This tree has a relatively narrow spread and doesn't appear to be likely to need much additional crown clearance as it matures. I recommend an LOD of 8 feet from the trunk of this tree. Given the existing site conditions, no additional protection beyond the LOD is necessary;
- 62 This is young and vigorous weeping Alaska cedar that is in very good condition and health. It's completely surrounded by impervious surface. The crown spread of this species maintains a narrow form, therefore, the LOD can reflect that allowance. I recommend an LOD equal to 10 feet from the trunk. Given the existing site conditions, no additional protection beyond the LOD is necessary.;
- 63 This is young and vigorous Colorado Blue spruce that is in very good condition and health. It's completely surrounded by impervious surface. The crown spread of this species maintains a rather narrow form, therefore, the LOD doesn't need to be broad to accommodate its developing crown. I recommend an LOD equal to 10 feet from the trunk. Given the existing site conditions, no additional protection beyond the LOD is necessary.;
- 64 Poor condition, non-viable and not recommended for retention;
- 65 This is a relatively young red oak that is in good condition and health. The only feature in its vicinity is a rockwall within its dripline to the east. Maintaining the LOD at a distance of 15 feet from the tree will provide adequate protection. Given the age and health of the tree, no additional protection beyond the LOD is necessary;
- 66 This is another relatively young red oak that is in good condition and health. The only feature in its vicinity is a rockwall within its dripline to the east. Maintaining the LOD at a distance of 15 feet from the tree will provide adequate protection. Given the age and health of the tree, no additional protection beyond the LOD is necessary;
- 67 This is a relatively young katsura tree that is in good condition and health. The only feature in the vicinity of this tree is the rockwall within its dripline to the east. Maintaining the LOD at a distance of 15 feet from the tree will provide adequate protection without requiring any additional protection beyond the LOD;

- 68 This is a very young red oak that is in good condition and health. The rockwall is also within its dripline to the east. Maintaining the LOD at a distance of 10 feet from the tree will provide adequate protection without requiring any additional protection beyond the LOD;
- 69 This is another very young red oak that is in good condition and health. The rockwall is within its dripline to the east, as well. Maintaining the LOD at a distance of 10 feet from the tree will provide adequate protection without requiring any additional protection beyond the LOD;
- 70 This is another relatively young katsura tree that is in good condition and health. There are no features in its vicinity. Maintaining the LOD at a distance of 10 feet from the tree will provide adequate protection;
- 71 Yet another relatively young katsura tree that is in good condition and health with no features in its vicinity. Maintaining the LOD at a distance of 10 feet from the tree will provide adequate;
- 72 An unidentified deciduous tree that is young and in very good condition and health. Judging by its architecture, it doesn't appear as though its crown will require much additional space as it develops, therefore, establishing the LOD at the dripline of 10 feet from the trunk is recommended without requiring any additional protection beyond the LOD;
- 73 A young and vigorous cherry tree that is in good condition and health. Like #72, it doesn't appear as though its crown will require much additional space as it develops, therefore, establishing the LOD at the dripline of 10 feet from the trunk is recommended for this tree, as well, without requiring any additional protection beyond the LOD;
- 74 Another unidentified deciduous tree that is young and in very good condition and health. Judging by its architecture, it doesn't appear as though this tree's crown will require much additional space as it develops either, therefore, establishing the LOD at the dripline of 10 feet from the trunk is recommended without requiring any additional protection beyond the LOD;
- 75 A young katsura tree that is in good condition and health with no features in its vicinity. Being a species that doesn't produce a broad crown, maintaining the LOD at a distance of 10 feet from the tree will provide adequate protection and clearance for it as it matures without requiring any additional protection beyond the LOD;
- 76 A small ornamental cherry tree that's in good condition and health with no features in its vicinity. Establishing the LOD at a distance of 10 feet from its trunk will provide adequate protection without requiring any additional protection beyond the LOD;
- 77 A small, young and vigorous dogwood that's in very good condition and health. This tree should get too large, nor should it require much distance for protection. Establishing the LOD at 10 feet from the trunk should be adequate to provide sufficient protection without requiring any additional protection beyond the LOD;
- 78 A horsechestnut that is very young and vigorous. While it is small now this tree could reach a considerably large size at maturity. Because this tree is so

young, in terms of underground impacts, the limits could be as a distance from the trunk as little as 7.5 feet, however, in order to provide clearance the LOD between the tree and any structures should be at least 15 feet from the trunk, but no additional protection is necessary;

- 79 A young and vigorous English holly that is in very good condition and health. As the tree develops, the crown should not require too much space for clearance so an LOD of 10 feet from the trunk is acceptable without requiring any additional protection beyond the LOD.

For virtually all of the trees, the limits of disturbance have been set in locations where disturbance within them should not be necessary. In the case of most of the trees, extensive impacts are not recommended. In my opinion, in the case of all of the trees, the recommendations for work within the LOD apply to impacts and development within 10 feet of the recommended LODs. Therefore the limits, as specified above, are between the minimum distance where no, or very limited impacts should take place, to a location 10 feet beyond this point where impacts and structures are allowed but the measures in the next section should be employed.

VII. Work within the LOD

Measures employed for lessening impacts to trees while working within the LOD depend upon several factors. The location wherein these practices should be utilized is the added protection area beyond (outside of) the perimeter of the area of no disturbance, upon which the protective fencing barrier should be erected. The factors considered as contributors to the location of the LOD and the extent of work and impacts allowed within this area are as follows:

- Extent of LOD in terms of distance from trunk;
- Type of impacts/work to take place within the LOD;
- Amount of LOD to be disturbed (just one side of tree or around entire tree), and
- Condition of tree to be impacted.

These factors should be considered when planning the project and particularly, impacts within the LODs. For most of the trees, the LODs are close enough to the tree that impacts within this area should be limited, if at all necessary.

If work within the LOD of any tree is necessary, the following measures are recommended:

- Maintain the protection fencing around the tree during construction activity;
- If construction machinery is to be used within the LOD, apply a minimum of 6 inches of wood chip mulch over the area within the LOD where the machinery will be used;
- Replace the protection fencing to the required location immediately following construction activity within the LOD, and
- Hand cut all damaged roots larger than 1 inch in diameter.

VIII. Use of this Report

This report is provided as a means of addressing the conditions of the trees on the site of the Nettleton House property in the City of Kirkland, WA, and to make recommendations for retention or removal and protection through development.

This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. There are several conditions affecting a tree's health which are pre-existing and cannot necessarily be ascertained with a surface analysis. These conditions include root and stem rot, internal cracks or construction root damage which may be hidden beneath the soil. In addition, certain circumstances can cause a rapid deterioration of a tree's condition. While Arboricultural Consulting used every reasonable means to examine these trees, this report is an opinion and the condition of these trees cannot be guaranteed or warranted. Given these facts in combination with the fact that external factors, such as weather events (i.e. drought and windstorms) and construction damage, all of which can contribute to the decline and/or failure of a tree, it is impossible to determine the eventual failure of any given tree. Therefore, a recommendation for retention or removal was based upon the immediate conditions of the trees and whether or not that condition presented a hazardous condition warranting removal. The determination of the tree condition was based solely upon the outward appearance of the trees. This report does not guarantee against the failure of trees not recommended for removal as part of this report. No attempt has been made to determine hidden or concealed conditions. Reports may be adversely affected due to the physical condition of the site and the difficulty of access that may lead to observation or evaluation difficulties. The work for this report has conformed to the standard of care employed by ISA Certified Arborists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed. Finally, this report is only intended to provide opinions and make recommendations and cannot guarantee against damage to the trees, damage to property or injury of the tree workers occurring during work on the trees.

Cordially,



Tony Shoffner
Consulting Arborist, Horticulturist
ISA Certified Arborist #PN-0909

Trees and Development – A Technical Guide to Preservation of Trees During Land Development. Nelda Matheny and James R. Clark, 1998, International Society of Arboriculture.

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas, 2nd Edition. Nelda Matheny and James R. Clark, 1994, International Society of Arboriculture.

TREE EVALUATION DATA
Nettleton Property

Tree #	Tree Spc	Dbh (In)	Spread (Ft)	Limits of Disturbance	Condition Rating	Tree Condition Notes	Recommendation Per Condition	Transplantable Yes or No
1	LIST	10	20	12	1	Very good condition and health	Retain	Yes
2	QURU	12	20	12	1	Very good condition and health	Retain	Yes
3	MASP	20	25	13	2	Generally good condition and health	Retain	No
4	PIPU	10	20	10	1	Very good condition and health	Retain	Yes
5	PIPU	12	20	10	1	Very good condition and health	Retain	Yes
6	MASP	18	20	10	2	Generally good condition and health	Retain	No
7	PRLA	10	30	15	2	Generally good condition and health	Retain	No
8	BEPE	36	40	15	1	Very good condition and health	Retain	No
9	CEDE	22	25	15	1	Very good condition and health	Retain	No
10	PIPU	24	25	15	1	Very good condition and health	Retain	No
11	QURU	16	25	13	1	Very good condition and health	Retain	No
12	CEJA	16	15	10	1	Very good condition and health	Retain	No
13	PLxAC	26	25	15	1	Very good condition and health	Retain	No
14	QURU	16	35	18	1	Very good condition and health	Retain	No
15	QURU	20	35	18	1	Very good condition and health	Retain	No
16	MASP	12	10	N/A	4	Trunk decay and branch dieback	Remove	No
17	PRLA	10	20	10	2	Generally good condition and health	Retain	No
18	PRSP	24	30	15	2	Generally good condition and health	Retain	No
19	ILAQ	14	30	15	2	Generally good condition and health	Retain	No
20	PRLA	8	25	13	2	Generally good condition and health	Retain	No
21	PRLA	10	25	13	2	Generally good condition and health	Retain	No
22	PRSP	24	35	18	2	Generally good condition and health	Retain	No
23	POTR	96	45	N/A	4	Previous failure, terminal dieback, old	Remove	No
24	POTR	90	45	N/A	4	Previous failure, terminal dieback, old	Remove	No
25	PISY	18	15	N/A	4	Topped	Remove	No
26	PIMO	18	10	N/A	4	Topped	Remove	No
27	ACNE	16	15	10	3	A portion has been topped	Retain	No
29	PIMO	30	25	15	2	Generally good condition and health	Retain	No
30	CEDE	12	15	15	1	Very good condition and health	Retain	Yes
31	CEDE	42	35	18	1	Very good condition and health	Retain	No
32	DEC	30	30	N/A	4	Extensive decay column, topped	Remove	No
33	PIMO	18	30	N/A	4	Topped	Remove	No
34	PRLA	12	15	8	3	Moderate trunk decay	Retain	No
35	THPL	36	20	15	3	Codominant leaders	Retain	No
36	PIMO	30	30	15	3	Somewhat sparse crown	Retain	No
37	FASY	28	30	15	1	Very good condition and health	Retain	No
38	DEC	34	35	N/A	4	Trunk decay, appears to be dead	Remove	No
39	PSME	30	30	15	2	Generally good condition and health	Retain	No
40	FASY	24	35	20	1	Very good condition and health	Retain	No
41	THPL	32	20	10	2	Generally good condition and health	Retain	No
42	QURU	54	50	18	1	Very good condition and health	Retain	No
43	PSME	34	35	18	2	Generally good condition and health	Retain	No
44	PSME	36	30	N/A	4	Extensive upper branch dieback, sparse crown	Retain	No
45	SABA	34	65	25	1	Very good condition and health	Retain	No
46	PRSP	12	20	10	1	Very good condition and health	Retain	Yes
47	BEPE	34	45	20	1	Very good condition and health	Retain	No
48	PISP	12	20	10	1	Very good condition and health	Retain	Yes
49	CHPI	14	15	8	1	Very good condition and health	Remove	Yes

TREE EVALUATION DATA
Nettleton Property

Tree #	Tree Spc	Diameter (In)	Spread (Ft)	Limits of Disturbance	Condition Rating	Tree Condition Notes	Recommendation Per Condition	Transplantable Yes or No
50	PSME	28	30	15	3	Symptoms of stress (low LCR)	Retain	No
51	PSME	24	30	15	4	Symptoms of decline (sparse & chlorotic crown)	Remove	No
52	PSME	28	30	15	4	Symptoms of stress (low live crown ratio)	Remove	No
53	PSME	38	25	15	4	Symptoms of stress (low live crown ratio)	Remove	No
55	CHOB	16	15	8	1	Very good condition and health	Retain	Yes
56	CEDE	10	10	10	1	Very good condition and health	Retain	Yes
57	THOC	12	10	5	1	Very good condition and health	Retain	Yes
58	THOC	12	10	5	1	Very good condition and health	Retain	Yes
59	PSME	52	35	15	3	Symptoms of stress (low live crown ratio)	Retain	No
60	PSME	36	35	15	3	Symptoms of stress (low live crown ratio)	Retain	No
61	PISP	16	10	8	1	Very good condition and health	Retain	Yes
62	CHNO	6	15	10	1	Very good condition and health	Retain	Yes
63	PIPU.GL	6	10	10	1	Very good condition and health	Retain	Yes
64	PSME	22	25	N/A	4	Topped	Remove	No
65	QURU	14	30	15	1	Very good condition and health	Retain	No
66	QURU	12	30	15	1	Very good condition and health	Retain	No
67	CEJA	12	25	15	1	Very good condition and health	Retain	No
68	QURU	6	20	10	1	Very good condition and health	Retain	Yes
69	QURU	8	20	10	1	Very good condition and health	Retain	Yes
70	CEJA	14	25	10	1	Very good condition and health	Retain	No
71	CEJA	10	20	10	1	Very good condition and health	Retain	No
72	DEC	8	20	10	1	Very good condition and health	Retain	Yes
73	PRSP	10	15	10	1	Very good condition and health	Retain	No
74	DEC	10	20	10	1	Very good condition and health	Retain	No
75	CEJA	8	15	10	1	Very good condition and health	Retain	Yes
76	PRSP	8	20	10	1	Very good condition and health	Retain	Yes
77	COSP	6	15	10	1	Very good condition and health	Retain	Yes
78	AEHI	8	20	15	1	Very good condition and health	Retain	Yes
79	ILAQ	8	15	10	1	Very good condition and health	Retain	Yes

Tree# - Corresponds to numbers as shown on map

Tree Species Codes -

ACNE=Acer negundo (box elder)

AEHI=Aesculus hippocastanum (horse chestnut)

BEPE=Betula pendula (silver birch)

CEDE=Cedrus deodara (deodar cedar)

CEJA=Cercidiphyllum japonicum (katsura)

CHNO=Chamaecyparis nootkatensis (Alaska cedar)

CHOB=Chamaecyparis obtusa (Hinoki cypress)

CHPI=Chamaecyparis pisifera 'boulevard'
Boulevard cypress

COSP=Cornus species (dogwood)

DEC=Unidentified deciduous species

FASY=Fagus sylvatica (common beech)

ILAQ=Ilex aquifolium (English holly)

LIST=Liquidambar styraciflua (Sweetgum)

MASP=Malus species (apple)

Diameter - Diameter in inches at 4.5' above grade

Spread - Approximate average crown spread in feet

Limits of Disturbance - Recommended limits of disturbance

PIPU=Picea pungens (Colorado spruce)

PIPU.GL=Picea pungens 'glauca' (Colorado blue spruce)

PIMO=Pinus monticola (western white pine)

PISP=Pinus species (ornamental pine)

PISY=Pinus sylvestris (Scot's pine)

PLxAC=Platanus x acerfolia (London plane)

POTR=Populus trichocarpa (black cottonwood)

PRLA=Prunus laurocerasus (cherry laurel)

PRSP=Prunus species (ornamental cherry)

PSME=Pseudotsuga menziesii (Douglas fir)

QURU=Quercus rubra (red oak)

SABA=Salix babylonica (Chinese willow)

THOC=Thuja occidentalis (arborvitae)

THPL=Thuja plicata (western red cedar)

TREE EVALUATION DATA
Nettleton Property

Condition Rating

1=Excellent Condition

2=Good Condition (viable), candidate for retention

3=Fair Condition (viable), candidate for retention potential targets

4=Poor condition, removal recommended

Recommendation Per Condition - Retain or remove based upon condition

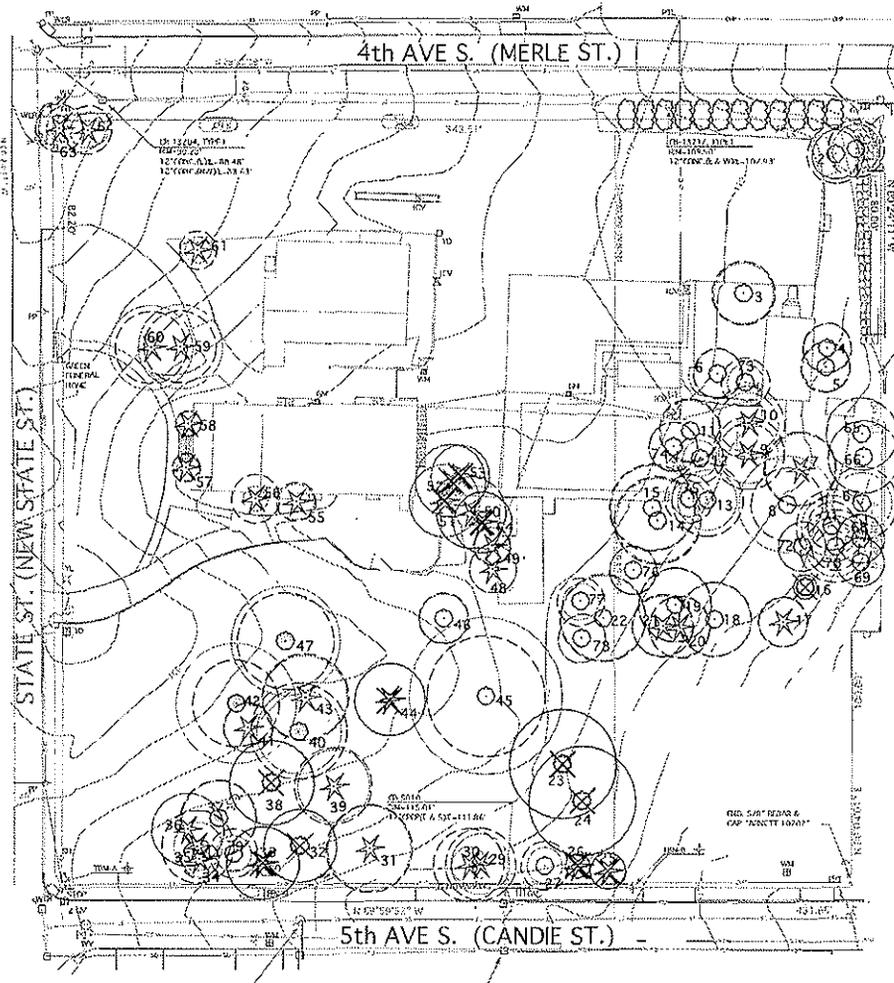
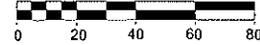
Transplantable - Whether or not the tree is transplantable based upon size and condition

TREE CONDITION EVALUATION MAP

The Nettleton House Property



Scale 1" = 40'



FENCING SIGN DETAIL

Tree Protection Area, Entrance Prohibited
To report violations contact:
City Code Enforcement
41423287-3224

- MINIMUM FOUR (4) FOOT HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE OR DESIGNATED LIMIT OF DISTURBANCE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCLOSE TREE (S) WITH ALL FENCE POSTS USING PER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
- TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOIL AS SOON AS POSSIBLE.
- NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.
- FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE.

TREE PROTECTION FENCING DETAIL

LEGEND

Trees in Good Condition with drip-line and limits of disturbance

Trees in Poor Condition

TREE CONDITION EVALUATION MAP
THE NETTLETON PROPERTY

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Date: March 15, 2007
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